

FACT SHEET FOR NPDES PERMIT WA-003200-0
EVERETT SHIPYARD PIERS 1, 3, AND ADJACENT AREAS

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FACILITY NAME: Everett Shipyard

INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has authorized the state of Washington to administer the NPDES permit program. Chapter 90.48 RCW defines the Department of Ecology's authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the state include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of waste water to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty (30) days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A—Public Involvement of the fact sheet for more detail on the public notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. Comments and the resultant changes to the permit will be summarized in Appendix D—Response to Comments.

GENERAL INFORMATION	
Applicant	Everett Shipyard
Facility Name and Address	Everett Shipyard Piers 1, 3, and Adjacent Areas
Type of Facility	Ship Building and Repairing
SIC Code	3731
Discharge Location	Waterbody name: Port Gardner Bay Latitude: 47° 59' 57" N. Longitude: 122° 12' 51" W.
Water Body ID Number	WA-07-0010

FACILITY NAME: *Everett Shipyard*

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

INDUSTRIAL PROCESS

Everett Shipyard is a ship repair facility located on Port Gardner Bay in Everett, WA (Figure 1). Everett Shipyard operates a shipyard intermittently at Piers 1, 3, and adjacent areas less than five miles south from their full-time permanent site at 1016 14th Street. Everett Shipyard rents a portion of the facility from the Port of Everett for ship repairs including paint preparation and painting. Everett Shipyard has entered into a long-term lease of up to four acres of the referred area and intends to move all of its ship building and repair activities to this location prior to 2008. Everett Shipyard currently has no permanent facilities at the site to be permitted and intends to construct such facilities prior to 2008. Work is currently conducted on ships moored at pier side. A fabrication area is located on the pier adjacent to the vessel under repair. Hazardous chemicals are temporarily stored on the site. Process waste water is pressure wash water for surface preparation. Industrial storm water is discharged from the exposed pier fabrication area. This is a new permit for an existing discharger.

Wastes generated by shipyard activities include spent wash water, spent solvents, antifreeze, oils and paints, various cleaners, and anticorrosive compounds, paint chips, scrap metal, welding rods, containers, and miscellaneous trash such as paper and glass. These pollutants may enter the wastewater stream through the application and preparation of paints and the painted surface; handling and storing paints, solvents, thinners, oils and antifreeze, including accidental spills; the fracturing and breakdown of abrasive grits; and the repair and maintenance of mechanical equipment.

The primary sources of waste water at shipyards are from pressure wash waste water and storm water. Secondary sources include cooling water, pump testing, gray water, sanitary waste, bilge water, and ballast water. Engine room bilge water and oily wastes are typically collected and disposed of through a licensed disposal company.

When painting or paint preparation occurs, a barge is moored adjacent to the vessel under repair. The barge holds tarping enclosing the area of the outside surface under repair eliminating discharges to Port Gardner Bay. See figures in Appendix C. Hydroblast waste water is discharged to the Everett wastewater treatment plant. Industrial storm water from the fabrication area on the pier is currently discharged directly to Port Gardner Bay.

DISCHARGE OUTFALL

The facility has a reasonable potential to discharge to Port Gardner Bay by extensive over water work on the hull and superstructure of vessels and from work on Piers 1, 3, and adjacent areas.

PERMIT STATUS

This is a new, previously unpermitted facility.

An application for a permit was submitted to the Department on May 3, 2001.

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WASTEWATER CHARACTERIZATION

The proposed wastewater discharge is characterized for the following regulated parameters:

Table 1: Wastewater Characterization

Outfall	Copper, µg/l	Lead, µg/l	Zinc, µg/l	Turbidity NTU Over Background
Stormwater				
SW1	380	660	3,410	112
Acute Criteria	4.8	210	90.0	10.0
¹ Average of samples December 1, 1996, to February 1, 2000, from the Everett Shipyard 14 th Street site				

Hydroblast Wastewater

Measurements at other shipyards and in a 1993 METRO study found hydroblast waste water well above acute and chronic water quality criteria.

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in an NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the surface water quality standards (Chapter 173-201A WAC), ground water standards (Chapter 173-200 WAC), sediment quality standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. The Department does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. Effluent limits are not always developed for pollutants that may be in the discharge but not reported as present in the application. In those circumstances, the permit does not authorize discharge of the non-reported pollutants. Effluent discharge conditions may change from the conditions reported in the permit application. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department of Ecology. The Permittee may be in violation of the permit until the permit is modified to reflect additional discharge of pollutants.

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TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Collection, treatment, and recycle or discharge to the sewerage system of hydroblast waste water is available technology and is used at most shipyards. Even most boatyards collect and recycle hull wash water. Hydroblast wastewater collection, treatment, and recycle or discharge to a sanitary sewerage system is determined to be the technology-based limitation cited in Chapter 173-220 WAC as all known, available, and reasonable methods of treatment (AKART). All process water discharges directly to Port Gardner Bay are prohibited.

Everett Shipyard will be required to continue to follow and improve as necessary best management practices (BMPs). The piers will be cleaned to remove solid wastes including paint chips, scrap metal, wood, plastic, paper, and welding rods. No visible sheen will be allowed.

Discharges of waste water from cooking, dishwashing, and showers to the sanitary sewerage system or hauling offsite is determined to be AKART.

Recycling of solvents on site or off site disposal is AKART. Zero discharge from maintenance shops is determined to be AKART.

Discharge of bilge and ballast water by hauling off site for treatment or discharge to the sanitary sewerage system is determined to be AKART.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established surface water quality standards. The Washington State surface water quality standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the state of Washington's water quality standards for surface waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in receiving water while remaining protective of aquatic life. Numerical criteria set forth in the water quality standards are used along with chemical and physical data for the waste water and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA, 1992). These criteria are designed to protect humans from cancer and other diseases and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

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NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The state of Washington's Antidegradation Policy requires that discharges into receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of receiving water are of higher quality than the criteria assigned, the natural conditions shall be protected. More information on the state Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

MIXING ZONES

The water quality standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

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DESCRIPTION OF THE RECEIVING WATER

The facility discharges to the Everett wastewater treatment plant. The over water work on the hull and superstructure by Everett Shipyard has a reasonable potential to discharge to Port Gardner Bay. Other nearby point source outfalls include Kimberly Clark World Wide, Everett Shipyard Inc 14th Street, and several boatyards. Significant nearby non-point sources of pollutants include city of Everett municipal storm water. Characteristic uses include the following:

water supply (industrial, agricultural); stock watering; fish migration; fish rearing, spawning and harvesting; wildlife habitat; secondary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall meet or exceed the requirements for most uses.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA, 1992). Criteria for this discharge are summarized below:

Turbidity	less than 10 NTU above background
Acute Criteria Cu	4.8 µg/l
Acute Criteria Pb	210 µg/l
Acute Criteria Zn	90 µg/l

Port Gardner and Inner Everett Harbor are 303d listed for sediments. Pollutants include benzo(a)pyrene, flouranthene, fluorine, mercury, sediment bioassay, total PCBs, and zinc.

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

Pollutants in an effluent may affect the aquatic environment near the point of discharge (near-field) or at a considerable distance from the point of discharge (far-field). Toxic pollutants, for example, are near-field pollutants—their adverse effects diminish rapidly with mixing in the receiving water. Conversely, a pollutant such as BOD is a far-field pollutant whose adverse effect occurs away from the discharge even after dilution has occurred. Thus, the method of calculating surface water quality-based effluent limits varies with the point at which the pollutant has its maximum effect.

The derivation of surface water quality-based limits also takes into account the variability of the pollutant concentrations in both the effluent and the receiving water.

Oil and Grease: The federal criteria for oil and grease in the *Quality Criteria for Water, 1986* is this: "that surface waters shall be virtually free....from floating oils of petroleum."

Bioaccumulation of petroleum products presents two especially important public health problems: (1) the tainting of edible, aquatic species, and (2) the possibility of edible marine organisms incorporating the high boiling, carcinogenic polycyclic aromatics in their tissues. Oils of any kind can cause drowning of water fowl because of loss of buoyancy, exposure because of loss of insulating capacity of feathers and starvation and vulnerability to predators because of lack of mobility, lethal effects on fish by coating epithelial surfaces of gills, thus preventing

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respiration, asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom and adverse aesthetic effects of fouled shorelines and beaches. Oil pollutants may also be incorporated into sediments. There is evidence that once this occurs in the sediments below the aerobic surface layer, petroleum can remain unchanged and toxic for long periods, since its rate of bacterial degradation is slow. The Department determines 5 mg/L oil and grease limit, no visible oil sheen, discoloration or turbidity meets this requirement. Monitoring will be by grab sample, visual observation, and logging and noncompliance notification.

Turbidity—Due to the potential fluctuations in turbidity of the receiving water and the effluent, turbidity monitoring is required to assess compliance with the water quality criteria for turbidity. The criteria for turbidity allows no more than a 5 NTU increase over background turbidity.

Toxic Pollutants—Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the water quality standards for surface waters or from having surface water quality-based effluent limits.

The following toxics were determined to be present in the discharge: copper, lead, and zinc.

The resultant effluent limits are as follows: The direct discharge of hydroblast waste water, industrial storm water, and all other waste water is prohibited.

WHOLE EFFLUENT TOXICITY

The water quality standards for surface waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the waste water in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing.

Toxicity caused by unidentified pollutants is not expected in the effluent from this discharge as determined by the screening criteria given in Chapter 173-205 WAC. Therefore, no whole effluent toxicity testing is required in this permit. The Department may require effluent toxicity testing in the future if it receives information that toxicity may be present in this effluent.

HUMAN HEALTH

Washington's water quality standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992).

The Department has determined that the applicant's discharge is unlikely to contain chemicals regulated for human health.

A determination of the discharge's potential to cause an exceedance of the water quality standards was conducted as required by 40 CFR 122.44(d).

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SEDIMENT QUALITY

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

The Department has determined through a review of the discharger characteristics and effluent characteristics that this potential discharge has no reasonable potential to violate the sediment management standards.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated ground water quality standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

This Permittee has no discharge to ground and therefore no limitations are required based on potential effects to ground water.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

NONROUTINE AND UNANTICIPATED DISCHARGES

Occasionally, this facility may generate waste water which is not characterized in their permit application because it is not a routine discharge and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean waste waters but may be contaminated with pollutants. The permit contains an authorization for nonroutine and unanticipated discharges. The permit requires a characterization of these waste waters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this waste water and opportunities for reuse, Ecology may authorize a direct discharge via the process wastewater outfall or through a stormwater outfall for clean water, require the waste water to be placed through the facilities wastewater treatment process or require the water to be reused.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under Section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The proposed permit requires the Permittee to develop and implement a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs.

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SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

This proposed permit requires, under authority of RCW 90.48.080, that the Permittee develop a solid waste plan to prevent solid waste from causing pollution of waters of the state. The plan must be submitted to the local permitting agency for approval, if necessary, and to the Department.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet water quality standards for surface waters, sediment quality standards, or water quality standards for ground waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued for five (5) years.

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REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.
1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.
1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.
1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.
1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Tsivoglou, E.C., and J.R. Wallace.

1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Washington State Department of Ecology.

Laws and Regulations (<http://www.ecy.wa.gov/laws-rules/index.html>)

Permit and Wastewater Related Information

(<http://www.ecy.wa.gov/programs/wq/wastewater/index.html>)

Wright, R.M., and A.J. McDonnell.

1979. In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(E2). (Cited in EPA 1985 op.cit.)

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to issue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on October 2 and 9, 2003, in *The Everett Herald* to inform the public that an application had been submitted and to invite comment on the issuance of this permit.

The Department published a Public Notice of Draft (PNOD) on February 18, 2004, in *The Everett Herald* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to:

Water Quality Permit Coordinator
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (425) 649-7293, or by writing to the address listed above.

This permit and fact sheet were written by John Drabek.

APPENDIX B—GLOSSARY

Acute Toxicity—The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

AKART—An acronym for “all known, available, and reasonable methods of treatment.”

Ambient Water Quality—The existing environmental condition of the water in a receiving water body.

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in waste water. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect waste water.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD₅—Determining the biochemical oxygen demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD₅ is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect waste waters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity—The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

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Compliance Inspection - With Sampling—A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity—Clearing, grading, excavation, and any other activity which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Continuous Monitoring—Uninterrupted, unless otherwise noted in the permit.

Critical Condition—The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor—A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction, e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Engineering Report—A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria—Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the waste water. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated waste water and/or the presence of animal feces.

Grab Sample—A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic waste water. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Major Facility—A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

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Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)—The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility—A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone—An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)—The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/state permits issued under both state and federal laws.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL) —A calculated value five times the MDL (method detection level).

Responsible Corporate Officer—A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)—Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

FACILITY NAME: *Everett Shipyard*

Upset—An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C—FIGURES

















APPENDIX D—RESPONSE TO COMMENTS

RESPONSIVENESS SUMMARY FOR THE EVERETT SHIPYARD PIERS 1, 3, AND ADJACENT AREA NPDES PERMIT

The Department received comments from Rockland Becker of Fairhaven Shipyard

1. Since Everett Shipyard produces industrial ship repair only references to Drydocks and the processes associated with them should be omitted from an industrial ship repair permit at Everett Shipyard.

Response: Everett Shipyard is only working on vessels moored at pier side. The conditions for in water work are similar to the conditions for in water work in other shipyard NPDES permits.

2. The following categories have been omitted from the draft NPDES permit: S2) Monitoring Requirements, Everett Shipyard should be monitoring outfall SW1. The permit has omitted any reference to sampling, analytical procedures, flow measurement, or laboratory accreditation. S4) Operation and Maintenance, S6) Solid Waste Disposal, S7) Engineering Report Facility Plan. AKART and engineering reports are a consistent component of NPDES permits.

Response: Wastewater discharges are prohibited under the permit so there is no wastewater discharge to monitor. A treatment system will not be installed for the in water work. Tarping will prevent the generation of wastewater discharges. Therefore no operation and maintenance condition is required. The solid waste disposal condition is in S3. of the draft permit. The Department agrees a stormwater engineering report is required. A stormwater engineering report will be required to be submitted by a licensed engineer for approval. Zero direct discharge of storm water is determined to be AKART.

3. Appendix C is referenced for data but no data is in Appendix C.

Response: The only reference to Appendix C is on page 2 of the fact sheet. The reference is to the figures in Appendix C.

FACILITY NAME: Everett Shipyard

4. There are no limitations listed for stormwater discharge. However, listed on page 2 of the fact sheet is a statement industrial stormwater from the fabrication are on the pier is currently discharged directly to Port Gardner Bay. Table 1: Wastewater Characterization lists concentrations that do not meet water quality standards.

Response: Direct discharge of storm water is prohibited in the draft permit and in the final permit eliminating this wastewater discharge to Port Gardner Bay. Table 1 lists wastewater characterization for the shipyard source category.

5. The draft permit fails to address Municipal Sewer System Discharges.

Response: The permit does not address discharges to the municipal sewer system because the City of Everett is delegated to regulate discharges to the sanitary sewer system.

6. AKART, BMPs, and an Engineering Report must be required before the NPDES permit can prohibit discharges of hydroblast waste water. A method to control the discharge must be identified.

Response: AKART is determined to be discharge to the sanitary sewer system or recycle. This is the method identified in the fact sheet. BMPs cannot achieve this level of control. The Department concurs an engineering report must be submitted for approval for the hydroblast wastewater collection system. The permit will be modified to include this requirement.

7. The permit has omitted reporting planned changes.

Response: The condition for reporting planned changes is in Condition G3. Reporting Planned Changes.